

# COMMUTATOR AND ELECTRIC ROTARY DEVICE



HAVING THE SAME

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## BACKGROUND OF THE INVENTION

### Field of the Invention

[0001]The present invention relates to a commutator and an electric rotary device, e.g., a motor, an electric generator, having the commutator.

### Description of Background Art

[0002]A conventional commutator of an electric rotary device, e.g., a motor, an electric generator, is shown in Fig. 5. Commutating piece 12 of the commutator 10 are made of a copper alloy, and they are held on a core 14, which is made of, for example, phenolic resin.

[0003]The commutating pieces 12 of a micro motor are often made of a clad material, which is made by adhering two metals, e.g., a copper alloy and a gold-silver alloy.

[0004]Another conventional commutator is shown in Fig. 6. In the commutator 10, sliding members 16 are respectively fixed on outer faces of commutating pieces 12, which are made of a copper alloy, and they are held by a plastic core 14. Each of the sliding members 16 is manufactured by the